United States Environmental Protection Agency
EPA New England
One Congress Street, Suite 1100
Boston, MA 02114-2023

December 11, 2002

To: B. Olson, EPA
J. Kilborn, EPA
H. Inglis, EPA
R. Howell, EPA
D. Moore, USACE
K.C. Mitkevicius, USACE
S. Steenstrup, MA DEP (2 copies)
C. Fredette, CT DEP
A. Silfer, GE
J.R. Bieke, Esquire, Shea & Gardner
S. Messur, BBL
T. O'Brien, MA EOEA
D. Young, MA EOEA
R. Cataldo, ENSR
R. Nasman, The Berkshire Gas Company
Mayor Hathaway, City of Pittsfield
Commissioner of Public Works and Utilities, City of Pittsfield
Public Information Repositories

RE: November 2002 Monthly Report
1.5 Mile Reach Removal Action
GE-Pittsfield/Housatonic River Site

Enclosed please find the November 2002 Monthly Report for the 1.5 Mile Reach Removal Action. In accordance with the Consent Decree for the GE-Pittsfield/Housatonic River Site, the United States Environmental Protection Agency (EPA) is performing the 1.5 Mile Reach Removal Action, with General Electric funding a portion of the project through a cost sharing formula.

The EPA has entered into an agreement with the United States Army Corps of Engineers (USACE) to assist in the design and construction of the Removal Action. The USACE subsequently awarded a design-construct contract to Weston Solutions, Inc. (Weston). Weston, with several subcontractors, will be performing the design and construction activities for the 1.5 Mile Reach Removal Action.

If you have any questions, please contact me at (413) 236-0969.

Sincerely,

Dean Tagliaferro

Dean Tagliaferro
1.5 Mile Reach Removal Action Project Manager

1. Overview

During November 2002, EPA, the United States Army Corps of Engineers (USACE), the USACE's contractor, Weston Solutions, Inc. and Weston's subcontractors continued remediation activities on the 1.5 Mile Reach Removal Action. The primary work included completing the bank soil and sediment excavation activities in Cells 3 and 4. Non-Aqueous Phase Liquid (NAPL)-impacted sediment was observed in Cell 3. All NAPL-impacted sediment was successfully removed through mechanical excavation. In addition, backfilling activities were substantially completed in Cells 2 and 3, and partially completed for Cell 4.

2. Chronological description of tasks performed

Refer to Figure 1 for an orientation of the sheetpile cells and their respective locations.

At the end of October, Cell 2 excavation was completed and river bottom backfilling was initiated. During the first week of November, backfilling activities were completed in Cell 2. The river bottom was backfilled with a minimum of 4 inches of common fill, a 6 inch layer of Filter Layer A and then a 20 inch layer of 12-inch rip rap. The riverbank below elevation 975 feet above mean sea level was backfilled with a 6 inch layer of Filter Layer A, a 6 inch layer of Filter Layer B and 24 inches of 18-inch rip rap. The riverbank above elevation 975 was backfilled with minimum of 26 inches of common fill. An 8 to 10 inch layer of top soil will be placed at a later date. Backfill verification survey of the river bottom and riverbanks in Cell 2 was completed to ensure proper backfill elevations were achieved. Once backfill elevations were confirmed, the Cell 2 upstream cutoff wall was removed and the downstream cutoff wall was driven to river bottom to allow river to flow on south side of river channel. Rip rap was placed immediately downstream of the Cell 2 downstream cut-off wall to prevent erosion of non-remediated river sediments.

The installation of 8-foot long sheetpile for the Cell 3 centerline under Lyman Street Bridge, the installation of 10-foot long sheetpile on the upstream of Cell 3, and the installation of Cell 3 downstream cutoff wall with standard 30-foot long sheetpile were all completed. Bin block were then removed from Cell 1 and moved to the interior of Cell 3 centerline for wall reinforcement. Once Cell 3 was isolated, the dewatering process began and water was pumped down to 6 inches from the river bottom with the water being discharged into Cell 4. The excavation cut limits were then marked out in Cell 3.

During the second week of November, Cell 3 dewatering was changed to pump water to the water treatment system. A sump in southeast corner of Cell 3 was installed and stone lined swales were constructed to channel water to the sump. Also, sheetpile joint sealing was completed to minimize the inflow of water.

Cell 3 excavation activities were then performed, starting with removal of sediment and soils from between the Lyman Street Bridge foundation rip rap. This was done by using high pressure water to wash the fines into Cell 3. The water was contained in the cell and pumped to the water

treatment system. Sediment excavation activities were then initiated. NAPL-impacted sediment was encountered during the excavation. NAPL impacted material was excavated and segregated, and all equipment used was decontaminated before continuing with excavating non-TSCA material. All NAPL-impacted material was successfully removed. Also, boulders larger then 2 x 2 x 2 ft were removed from Cell 3 and transferred to the boulder staging area in the Lyman Street parking lot.

On November 13 Cell 3 was temporarily flooded due to high river flows. By Friday November 15, the river levels dropped below the containment walls and the cell was again dewatered. The remaining sediment and bank excavation activities were completed. Post-excavation surveying was performed to confirm that the minimum required excavation depths were achieved and to document the quantity of NAPL-impacted sediment removed. Heavy rains were forecasted for the weekend that threatened to again overtop the containment walls. Therefore, backfilling of the cell was initiated Friday afternoon and continued on Saturday, November 16 until the river bottom was backfilled with common fill and covered with a minimum of one foot of 12-inch rip rap. The bank was restored up to elevation 975 with Filter Layer A, Filter Layer B and 24 inches of 18-inch rip rap. Some common fill was placed above elevation 975 to the top of the riverbank. A majority of the interior bin block support wall was also removed.

Both the NAPL-impacted and non-NAPL-impacted sediment that originated from Cell 3 were removed and transported to the appropriate stockpile management areas. (See Table 1 for a daily summary of material transported to the stockpile management area.)

Other remediation activities performed in the second week of November included the installation of the downstream cutoff wall in Cell 4. Subsequently, the dewatering of cell 4 was initiated. All water down to 6 inches from the river bottom was pumped over the sheetpile into the river. When the water level reached the 6 inch depth, the water was pumped to the water treatment system. Also, the TSCA and non-TSCA excavation limits were delineated and excavation cut elevations were staked out in Cell 4. In addition, the installation of the centerline sheet pile for Cells and 5 and 5A continued and the downstream cut-off wall for Cell 5 was installed.

During the third week of November, Cell 3 flooded again. The water level stayed below the 975 elevation and did not adversely affect the backfill placed the previous weekend. By November 20, the river levels dropped below the containment walls and Cell 3 was dewatered. The backfilling of Cell 3 was completed in the same manner described above for Cell 2. All remaining bin blocks were removed with the exception of bin blocks with top elevations one foot below the proposed final grade. In this situation, the bin blocks remained in place and were covered with a minimum of one foot of rip rap.

To encapsulate any remaining contaminated material located in between the Lyman Street Bridge foundation rip rap in Cell 3, shotcrete was placed onto the rip rap and on the upstream and downstream sides of the Lyman Street Bridge abutment. The post-restoration verification survey was completed and proper backfill elevations were confirmed. Once the backfill elevations were confirmed, the removal of centerline sheet pile wall of Cell 3 was initiated.

Also in the third week of November, excavation and removal of sediment and bank soils from Cell 4 was initiated. Cell 4 contained materials designated as TSCA material (i.e., contains an

average PCB concentration greater than 50 parts per million) and non-TSCA. Following the excavation of TSCA materials, all equipment was decontaminated before continuing with excavating non-TSCA material. The TSCA material was transported to the Building 63 stockpile management area and non-TSCA material was transported to the Building 65 and/or Building 68 stockpile management areas.

The dewatering of Cell 5 was initiated. All water down to 6 inches from the river bottom was pumped over the sheetpile into the river.

During the last week of November, the removal of centerline sheetpile wall and the upstream cutoff wall in Cell 3 was completed. Additional rip rap was placed as needed after the sheetpile walls were removed to make a smooth transition from Cell 3 to the GE-remediated area upstream of Cell 3 and with Cells 1A and 1B.

Excavation activities were completed in Cell 4. NAPL was not observed in Cell 4. Post-excavation surveying was performed to confirm that the minimum required excavation depths were achieved. Subsequently, riverbed and riverbank backfilling activities in Cell 4 were initiated. The backfill configuration for Cell 4 is the same as Cells 2 and 3. The installation of the common fill, Filter Layer A and the 12-inch rip rap into the riverbed was completed. The installation of Filter Layer A up the riverbank was completed and the installation of Filter Layer B up the riverbank was initiated.

The month ended with Cell 4 partially backfilled and Cell 5 dewatered to within six inches of the river bottom.

During the month of November, the water treatment system treated water from Cells 2, 3, and 4. Sampling of the water treatment system for parameters included in the NPDES exclusion permit was performed on November 25. Air monitoring for particulate matter (PM10 sampling) and surface water turbidity monitoring was performed on a daily basis. The monthly PCB air monitoring event was performed on November 21. The twice-monthly surface water sampling for total suspended solids (TSS) and PCBs was performed on November 6 and November 20. Sampling of common fill for chemical parameters was performed on November 8 and sampling for Filter Layer A for chemical parameters was performed on November 15.

Geotechnical samples were collected for top soil, common fill, Filter Layer A, 12-inch and the 18-inch rip rap. The results of the geotechnical testing are not included in the monthly reports but are contained in other submittals and are available upon request.

Stockpile management activities continued throughout the month of November. Set up of Building 63 and 68 as a stockpile management area was completed, including paving of Building 63 and 68 stockpile areas as well as building a ramp in Building 68. Building 63 was designated as a TSCA material stockpile area. Stockpiled TSCA materials were transferred from Building 65 to Building 63. Daily inspections, operation and maintenance activities were performed within Building 63, 65 and 68. This included the collection of accumulated water that drained from the stockpiles and transporting the water to the on-site water treatment system.

Miscellaneous site preparation/maintenance activities performed in November included maintenance and repairs to the stockpile area trucking route, construction of equipment

decontamination pad on the water treatment system pad, removal and stockpiling of saturated wood chip debris from access road on the south side of the river. Also, tree stumps from the Cell 5 riverbank were removed and transported to appropriate staging area on Lyman Street parking lot. Lastly, the construction of a temporary structure over the carbon vessels, sand filters and pumps to prevent this equipment from freezing up in the winter months was completed.

3. Sampling/test results received

PCB sample results for the water treatment system sampling program were received for water samples collected on the following dates: November 25 (Table 2). The non-PCB analytical results were received for samples collected on October 11, 16, and 23 (Table 2a). The non-PCB results for the November 25 samples are not yet available. Analytical results for backfill materials are summarized in Table 3. This includes the sampling results for a sample of Filter Layer A collected on October 16, 30, and November 15, and the sample of common fill collected on November 8. The results of the daily particulate air monitoring program are summarized in Table 4. Table 5 is a summary of daily turbidity monitoring results. Results for PCB and TSS samples and water column monitoring data collected on October 30, and on November 6 are presented in Table 6. Analytical results for the samples collected on November 20 are not yet available. Table 7 presents the analytical data associated with NAPL-impacted stockpile material characterization sample collected in Building 65 stockpile management area on October 24. Results for PCB wipe samples collected on November 20 of decontaminated equipment are summarized in Table 8. The PCB results for PCB air sampling conducted on November 21 are not yet available but the sampling summary can be found in Table 9.

4. Diagrams associated with the tasks performed

Figure 1 is a map of the Phase I area, and includes layout of Cells 1A, 1B, 2, 3, 4, 5, 5A, 6, and 6A, lot parcel identification numbers, water monitoring locations, PCB air sampling locations, access road locations, fence line location, the water treatment system pad location, crane pad locations, the effluent discharge location, and the utility trench location.

5. Reports received and prepared

Weston received a vibration monitoring summary report for the period of 1 November to 21 November from Geosonics, Inc. During this period, the seismograph was set up at the Lyman Street Bridge on continuous seismic mode. Activities occurring near the Lyman Street Bridge during this period included normal background activities, sheet pile driving, bin block installation and removal and general construction activities. The maximum ground vibration level reached during this period was 0.09 inches per second (ips). This reading occurred on November 15, 2002. This level represents 5 % of the state's recommended limit of 2.0 ips. All readings during this period complied with State Regulations.

6. Photo documentation of activities performed

See attached photos.

7. Brief description of work to be performed in December 2002

- Complete backfilling Cell 4.
- Excavate and backfill Cell 5.
- Remove the upstream cut-off wall for Cell 4 and the centerline sheetpile wall located between Cells 2 and 4. Potentially remove the upstream cut-off wall for Cell 5 and drive the downstream cut-off wall for Cell 5 to the river bottom allowing the river to flow through the north side of the river channel.
- If weather conditions permit, perform the installation of Shotcrete into the Lyman Street Bridge foundation in Cell 1A.
- Continue stockpile management activities at Buildings 63, 65 and 68.
- Transfer TSCA materials from Building 63 to Building 71 Landfill.
- Transfer non-TSCA materials from Building 65 and 68 to Hill 78 Landfill.
- Transport NAPL-impacted sediment to an approved off-site disposal facility.
- Continue operation of water treatment system.
- Continue daily air and turbidity monitoring.
- Continue PCB air sampling (once a month), water column sampling (twice a month), water treatment system sampling (monthly) and backfill material sampling (as needed).
- Continue vibration monitoring at Lyman Street Bridge.

8. Attachments to this report

Table 1. Excavation Quantity Summary Table

Table 2. NPDES PCB Sampling Results for Water Treatment System

Table 2a. NPDES non-PCB Sampling Results for Water Treatment System

Table 3. Backfill Material Testing Results

Table 1 - Quantity of Material Generated to Date
November 2002 Monthly Report

GE-Pittsfield/Housatonic River Project 1.5 Mile Removal Action
Pittsfield, MA

(Results are reported in cubic yards)

		Approximate Quantity Transported to Stockpile Management Area			Approximate Quantity Transported to OPCAs	
Date	Location	non-TSCA	TSCA	NAPL impacted	Hill 78 (non-TSCA)	Bldg. 71 (TSCA)
Site Preparation Activities						
12/01/01	Lyman Street Utility Relocation Excavation	213				
12/01/01	Drill Cuttings	6				
06/20/02	Drainage Swale Structure Installation	38				
	Total to Date from site preparation activities	257				
09/11/02	Building 65 Stockpile Management Area				225	
Bank Soil and Sediment						
09/26/02	Cell 1A	40				
09/27/02	Cell 1A	20				
10/01/02	Cell 1A	50				
10/02/02	Cell 1A	30		40		
	Cell 1B			20		
10/03/02	Cell 1B	60		50		
10/04/02	Cell 1B			40		
10/15/02	Cell 1			13		
10/18/02	Cell 2	210				
10/21/02	Cell 2	120	60			
10/23/02	Cell 2	80	110			
10/24/02	Cell 2	50				
10/25/02	Cell 2	80				
	Cell 2 bank	110				
10/28/02	Cell 2	100	20			
	Cell 2 bank	80				
10/29/02	Cell 2	10	20			
11/11/02	Cell 3	10		80		
11/12/02	Cell 3	110		120		
11/15/02	Cell 3	10				
	Cell 3 bank	140				

Table 1 - Quantity of Material Generated to Date
November 2002 Monthly Report

GE-Pittsfield/Housatonic River Project 1.5 Mile Removal Action
Pittsfield, MA

(Results are reported in cubic yards)

		Approximate Quantity Transported to Stockpile Management Area			Approximate Quantity Transported to OPCAs	
Date	Location	non-TSCA	TSCA	NAPL impacted	Hill 78 (non-TSCA)	Bldg. 71 (TSCA)
11/18/02	Cell 4 sediment & bank	370				
11/19/02	Cell 4 sediment & bank	580				
11/20/02	Cell 4	310	100			
11/21/02	Cell 4	270	80			
11/22/02	Cell 4	370				
11/25/02	Cell 4	20				
	Total to Date from bank soil and sediment	3230	390	363		
	Project Totals	**3487**	**390**	**363**	**225**	

Note:
The quantities contained in the previous monthly reports indicated the volumes were loose, or non-compacted volumes. However, comparison of the in-place excavated volume to the number of truckloads of excavated material indicates that each full truck contains approximately 10 cubic yards of compacted or "in-place"material, not 10 cubic yards of loose material. Therefore, the quantities listed in this table are "in-place"or compacted volumes. The quantity of material excavated during site preparation activities and subsequently transported to the Hill 78 OPCA were reduced by a factor of 20% to convert these quantities to in-place volumes.

Table 2 - NPDES Sampling Results for Water Treatment System
November 2002 Monthly Report

GE-Pittsfield/Housatonic River Project 1.5 Mile Removal Action
Pittsfield, MA

(Results are presented in part per billion, ppb)

Sample ID	Location	Date Collected	Aroclor 1016, 1221, 1232, 1242, & 1248	Aroclor 1254	Aroclor 1260	Total PCBs
H2-WW000001-0-2N25	Influent	11/25/2002	ND(13)	**150**	ND(13)	**150**
H2-WW000002-0-2N25	Intermediate	11/25/2002	ND(0.13)	**0.97**	ND(0.13)	**0.97**
H2-WW000003-0-2N25	Effluent	11/25/2002	ND(0.025)	**0.29**	ND(0.025)	**0.29**
Action Level	**Effluent**		**0.50**	**0.50**	**0.50**	**0.50**

Notes:
ND(0.13) - Analyte was not detected. The value in parentheses is the associated detection limit.
Intermediate - sample collected between carbon units which are being operated in series.
11/25/02 - monthly sampling

Table 2a - NPDES non-PCB Sampling Results for Water Treatment System
November 2002 Monthly Report

GE-Pittsfield/Housatonic River Project 1.5 Mile Removal Action
Pittsfield, MA

(Results are presented in part per billion, ppb)

Sample ID	H2-WW000001-0-2C11	H2-WW000001-1-2C11	H2-WW000002-0-2C11	H2-WW000003-0-2C11	NPDES Permit Regulatory Effluent Limits
Sample type	Influent	Influent (duplicate)	Intermediate	Effluent	
Date Collected	10/11/2002	10/11/2002	10/11/2002	10/11/2002	
Analyte					
APP IX SEMIVOLATILES					
1,2,4-TRICHLOROBENZENE	ND	**0.49 J**	ND	ND	**70**
1,4-DICHLOROBENZENE	ND	**0.48 J**	ND	ND	**100**
ACENAPHTHENE	ND	ND	ND	ND	**100**
BIS(2-ETHYLHEXYL) PHTHALATE	ND	ND	ND	ND	**100**
DI-N-BUTYL PHTHALATE	ND	ND	ND	ND	**N/A**
FLUORENE	ND	ND	ND	ND	**100**
PYRENE	ND	ND	ND	ND	**100**
APP IX VOLATILES					
1,2,4-TRICHLOROBENZENE	**0.50 J**	**0.50 J**	ND	ND	**70**
1,2-DICHLOROBENZENE	**0.22 J**	**0.22 J**	ND	ND	**75**
1,3-DICHLOROBENZENE	**0.22 J**	**0.22 J**	ND	ND	**100**
1,4-DICHLOROBENZENE	**0.79 J**	**0.79 J**	ND	ND	**100**
ACETONE	**2.1 J**	ND	ND	ND	**100**
BENZENE	**0.48 J**	**0.50 J**	ND	ND	**5***
CARBON TETRACHLORIDE	**7.9**	**7.6**	ND	ND	**N/A**
CHLOROBENZENE	**2.7**	**2.5**	ND	ND	**100**
CHLOROFORM	**0.99 J**	**1.0**	ND	ND	**100**
CIS-1,2-DICHLOROETHENE	**4.6**	**4.5**	ND	ND	**N/A**
DIBROMOMETHANE	ND	ND	ND	ND	**N/A**
NAPHTHALENE	**0.48 J**	**0.46 J**	ND	ND	**100**
TERT-BUTYL METHYL ETHER	**0.52 J**	**0.58 J**	ND	ND	**70**
TETRACHLOROETHYLENE(PCE)	ND	ND	ND	ND	**N/A**
TOLUENE	ND	ND	ND	ND	*
TRICHLOROETHYLENE (TCE)	**12.0**	**12.0**	ND	ND	**N/A**
VINYL CHLORIDE	**1.8**	**1.8**	ND	ND	**N/A**
METALS					
BARIUM	**31.7**	**31.7**	---	**27.1**	**100**
COPPER	**2.9**	**2.7**	---	**4.4**	**100**
LEAD	**2.3**	**1.8**	---	ND	**50**
ZINC	**21.6**	**19.9**	---	**16.7**	**100**
ORGANIC					
PETROLEUM HYDROCARBON	ND	ND	ND	ND	**5000**

NOTES:
* Total BTEX (Benzene, Toluene, Ethyl Benzene and Xylene) can not exceed 100 ppb
Intermediate - sample collected between carbon units which are being operated in series.
Only detected constituents are summarized
ND - not detected
--- not sampled
J - Indicates an estimated value
N/A - not available

Table 2a - NPDES non-PCB Sampling Results for Water Treatment System
November 2002 Monthly Report

GE-Pittsfield/Housatonic River Project 1.5 Mile Removal Action
Pittsfield, MA

(Results are presented in part per billion, ppb)

Sample ID	H2-WW000001-0-2C16	H2-WW000002-0-2C16	H2-WW000003-0-2C16	NPDES Permit Regulatory Effluent Limits
Sample type	Influent	Intermediate	Effluent	
Date Collected	10/16/2002	10/16/2002	10/16/2002	
Analyte				
APP IX SEMIVOLATILES				
1,2,4-TRICHLOROBENZENE	ND	ND	ND	**70**
1,4-DICHLOROBENZENE	ND	ND	ND	**100**
ACENAPHTHENE	**1.2 J**	ND	ND	**100**
BIS(2-ETHYLHEXYL) PHTHALATE	**1.7 J**	ND	ND	**100**
DI-N-BUTYL PHTHALATE	ND	ND	ND	**N/A**
FLUORENE	**0.60 J**	ND	ND	**100**
PYRENE	**0.46 J**	ND	ND	**100**
APP IX VOLATILES				
1,2,4-TRICHLOROBENZENE	ND	ND	ND	**70**
1,2-DICHLOROBENZENE	ND	ND	ND	**75**
1,3-DICHLOROBENZENE	ND	ND	ND	**100**
1,4-DICHLOROBENZENE	ND	ND	ND	**100**
ACETONE	**3.5 J**	ND	ND	**100**
BENZENE	ND	ND	ND	**5***
CARBON TETRACHLORIDE	**3.3**	ND	ND	**N/A**
CHLOROBENZENE	**4.2**	ND	ND	**100**
CHLOROFORM	**0.95 J**	ND	ND	**100**
CIS-1,2-DICHLOROETHENE	**2.1**	ND	ND	**N/A**
DIBROMOMETHANE	ND	ND	**0.27 J**	**N/A**
NAPHTHALENE	ND	ND	ND	**100**
TERT-BUTYL METHYL ETHER	**3.5**	ND	ND	**70**
TETRACHLOROETHYLENE(PCE)	ND	ND	ND	**N/A**
TOLUENE	ND	ND	**0.27 J**	*
TRICHLOROETHYLENE (TCE)	**5.0**	ND	ND	**N/A**
VINYL CHLORIDE	ND	ND	ND	**N/A**
METALS				
BARIUM	**31.3**	**25.2**	**23.4**	**100**
COPPER	**6.0**	**7.2**	**5.3**	**100**
LEAD	**7.8**	**14.6**	**8.3**	**50**
ZINC	**13.4**	**23.8**	**31.1**	**100**
ORGANIC				
PETROLEUM HYDROCARBON	ND	ND	ND	**5000**

NOTES:
* Total BTEX (Benzene, Toluene, Ethyl Benzene and Xylene) can not exceed 100 ppb
Intermediate - sample collected between carbon units which are being operated in series.
Only detected constituents are summarized
ND - not detected
--- not sampled
J - Indicates an estimated value
N/A - not available

Table 2a - NPDES non-PCB Sampling Results for Water Treatment System
November 2002 Monthly Report

GE-Pittsfield/Housatonic River Project 1.5 Mile Removal Action
Pittsfield, MA

(Results are presented in part per billion, ppb)

Sample ID	H2-WW000001-0-2C23	H2-WW000002-0-2C23	H2-WW000003-0-2C23	NPDES Permit Regulatory Effluent Limits
Sample type	Influent	Intermediate	Effluent	
Date Collected	10/23/2002	10/23/2002	10/23/2002	
Analyte				
APP IX SEMIVOLATILES				
1,2,4-TRICHLOROBENZENE	ND	ND	ND	**70**
1,4-DICHLOROBENZENE	ND	ND	ND	**100**
ACENAPHTHENE	**1.4 J**	ND	ND	**100**
BIS(2-ETHYLHEXYL) PHTHALATE	**0.95 J**	ND	ND	**100**
DI-N-BUTYL PHTHALATE	**0.58 J**	ND	ND	**N/A**
FLUORENE	ND	ND	ND	**100**
PYRENE	ND	ND	ND	**100**
APP IX VOLATILES				
1,2,4-TRICHLOROBENZENE	ND	ND	ND	**70**
1,2-DICHLOROBENZENE	ND	ND	ND	**75**
1,3-DICHLOROBENZENE	ND	ND	ND	**100**
1,4-DICHLOROBENZENE	ND	ND	ND	**100**
ACETONE	ND	ND	ND	**100**
BENZENE	ND	ND	ND	**5***
CARBON TETRACHLORIDE	**7.2**	ND	ND	**N/A**
CHLOROBENZENE	**0.56 J**	ND	ND	**100**
CHLOROFORM	**0.68 J**	ND	ND	**100**
CIS-1,2-DICHLOROETHENE	**0.54 J**	ND	ND	**N/A**
DIBROMOMETHANE	ND	ND	ND	**N/A**
NAPHTHALENE	ND	ND	ND	**100**
TERT-BUTYL METHYL ETHER	**25.0**	ND	ND	**70**
TETRACHLOROETHYLENE(PCE)	**0.31 J**	ND	ND	**N/A**
TOLUENE	ND	ND	ND	*
TRICHLOROETHYLENE (TCE)	**7.2**	ND	ND	**N/A**
VINYL CHLORIDE	ND	ND	ND	**N/A**
METALS				
BARIUM	**16.8**	---	**20.8**	**100**
COPPER	ND	---	ND	**100**
LEAD	**1.2**	---	ND	**50**
ZINC	ND	---	**10.4**	**100**
ORGANIC				
PETROLEUM HYDROCARBON	ND	ND	ND	**5000**

NOTES:
* Total BTEX (Benzene, Toluene, Ethyl Benzene and Xylene) can not exceed 100 ppb
Intermediate - sample collected between carbon units which are being operated in series.
Only detected constituents are summarized
ND - not detected
--- not sampled
J - Indicates an estimated value
N/A - not available

Table 3 - Backfill Material Testing Results
November 2002 Monthly Report

GE-Pittsfield/Housatonic River Project 1.5 Mile Removal Action
Pittsfield, MA

(Results are presented in part per million, ppm)

Sample ID	H2-OT000037-0-2C16	H2-OT000037-0-2C30	H2-OT000034-0-2N08	H2-OT000037-0-2N15	
Sample type	filter layer A	filter layer A	common fill	filter layer A	Regulatory Limits
Date Collected	10/16/2002	10/30/2002	11/08/2002	11/15/2002	(1)
Analyte					
APP IX SEMIVOLATILES					
	All Non-Detects	---	---	---	
APP IX VOLATILES					
ACETONE	ND	---	---	---	**3**
2-BUTANONE	ND	---	---	---	**NA**
BENZENE	**.0048 J**	---	---	---	**10**
ETHYL BENZENE	**.0016J**	---	---	---	**80**
METHYL METHACRYLATE	**0.0077**	---	---	---	**NA**
TOLUENE	**.0048J**	---	---	---	**90**
XYLENES (TOTAL)	**.0014J**	---	---	---	**500**
METALS					
ANTIMONY	**0.30**	---	---	---	**10**
ARSENIC	**2.60**	---	---	---	**30**
BARIUM	**33.10**	---	---	---	**1000**
BERYLLIUM	**0.21**	---	---	---	**0.7**
CHROMIUM	**6.4**	---	---	---	**1000**
COBALT	**6.5**	---	---	---	**500**
COPPER	**10.1**	---	---	---	**1000**
LEAD	**5.9**	---	---	---	**300**
NICKEL	**11.7**	---	---	---	**300**
TIN	ND	---	---	---	**10**
VANADIUM	**7.1**	---	---	---	**400**
ZINC	**36.6**	---	---	---	**2500**
ORGANIC					
PETROLEUM HYDROCARBON	ND	ND	ND	ND	**200***
PCBS					
AROCLOR-1254	ND	ND	ND	ND	
AROCLOR-1260	ND	ND	ND	ND	
PCB, TOTAL	ND	ND	ND	ND	**0.1***

Notes:
Only detected constituents are summarized
J - Indicates an estimated value
ND - not detected
--- not sampled
(1) - Massachusetts contingency plan S-1 limits
* - Project specific acceptable levels for backfill
NA - S-1 standard not available for this compound

Table 4 - Daily Air Monitoring Results
November 2002 Monthly Report

GE-Pittsfield/Housatonic River Project 1.5 Mile Removal Action
Pittsfield, MA

Date Collected	Sample Location	Average Site Concentration (mg/m^3)	Average Period (Hours:Min)
	Upwind	0.01	6:00
	Downwind	0.017	6:00
11/1/2002	Background	---	---
	Upwind	N/A	N/A
	Downwind	N/A	N/A
11/4/2002	Background	N/A	N/A
	Upwind	0.01	8:00
	Downwind	0.009	6:00
11/5/2002	Background	0.014	8:00
	Upwind	N/A	N/A
	Downwind	N/A	N/A
11/6/2002	Background	N/A	N/A
	Upwind	0.005	8:00
	Downwind	0.004	8:00
11/7/2002	Background	0.007	7:00
	Upwind	0.019	6:00
	Downwind	0.02	6:00
11/8/2002	Background	0.017	6:00
	Upwind	N/A	N/A
	Downwind	N/A	N/A
11/11/2002	Background	N/A	N/A
	Upwind	N/A	N/A
	Downwind	N/A	N/A
11/12/2002	Background	N/A	N/A
	Upwind	N/A	N/A
	Downwind	N/A	N/A
11/13/2002	Background	N/A	N/A
	Upwind	0.025	6:00
	Downwind	0.031	8:00
11/14/2002	Background	---	---
	Upwind	0.012	11:00
	Downwind	0.013	5:00
11/15/2002	Background	---	---
	Upwind	N/A	N/A
	Downwind	N/A	N/A
11/18/2002	Background	N/A	N/A
	Upwind	N/A	N/A
	Downwind	N/A	N/A
11/19/2002	Background	N/A	N/A
	Upwind	0.037	7:00
	Downwind	0.039	7:00
11/20/2002	Background	---	---

Table 4 - Daily Air Monitoring Results
November 2002 Monthly Report

GE-Pittsfield/Housatonic River Project 1.5 Mile Removal Action
Pittsfield, MA

Date Collected	Sample Location	Average Site Concentration (mg/m^3)	Average Period (Hours:Min)
	Upwind	0.067	6:00
	Downwind	0.072	5:00
11/21/2002	Background	---	---
	Upwind	N/A	N/A
	Downwind	N/A	N/A
11/22/2002	Background	N/A	N/A
	Upwind	0.00	9:00
	Downwind	0.034	9:00
11/25/2002	Background	---	---
	Upwind	0.006	7:00
	Downwind	0.00	7:00
11/26/2002	Background	---	---
	Upwind	N/A	N/A
	Downwind	N/A	N/A
11/27/2002	Background	N/A	N/A
notification level		**0.120**	
action level		**0.150**	

Notes:
N/A - Not available due to precipitation
--- - No reading due to technical difficulties with monitoring equipment

Table 5 - Daily Water Column Turbidity Monitoring Results
November 2002 Monthly Report

GE-Pittsfield/Housatonic River Project 1.5 Mile Removal Action
Pittsfield, MA

Date	Flow at Coltsville (cfs)	Location	Turbidity		
			Average	High	Low
11/1/2002	39	Upstream of Lyman Street Bridge	0.9	1.4	0.7
		Upstream of Elm Street Bridge	1.3	1.8	0.8
11/4/2002	47	Upstream of Lyman Street Bridge	5.4	7.8	3.6
		Upstream of Elm Street Bridge	5.1	6.5	4.2
11/5/2002	49	Upstream of Lyman Street Bridge	5.0	6.2	4.1
		Upstream of Elm Street Bridge	3.9	13.8	2.5
11/6/2002	63	Upstream of Lyman Street Bridge	17.5	126.7	4.0
		Upstream of Elm Street Bridge	17.0	21.6	11.3
11/7/2002	78	Upstream of Lyman Street Bridge	8.0	25.4	2.3
		Upstream of Elm Street Bridge	32.2	73.2	2.1
11/8/2002	66	Upstream of Lyman Street Bridge	2.9	7.0	1.7
		Upstream of Elm Street Bridge	2.0	4.0	1.2
11/11/2002	62	Upstream of Lyman Street Bridge	21.7	45.6	3.8
		Upstream of Elm Street Bridge	30.5	149.8	2.4
11/12/2002	75	Upstream of Lyman Street Bridge	8.0	12.6	4.3
		Upstream of Elm Street Bridge	7.3	17.0	3.4
11/13/2002	218	Upstream of Lyman Street Bridge	16.9	23.4	12.1
		Upstream of Elm Street Bridge	14.2	29.7	6.7
11/14/2002	157	Upstream of Lyman Street Bridge	29.2	113.5	4.6
		Upstream of Elm Street Bridge	7.2	21.9	2.4
11/15/2002	105	Upstream of Lyman Street Bridge	16.2	33.8	5.0
		Upstream of Elm Street Bridge	25.1	132.9	3.0
11/18/2002	197	Upstream of Lyman Street Bridge	218.03*	1210.3*	33.6
		Upstream of Elm Street Bridge	10.3	17.1	6.3
11/19/2002	142	Upstream of Lyman Street Bridge	503.4*	1691.6*	30.1
		Upstream of Elm Street Bridge	5.0	11.6	2.6
11/20/2002	114	Upstream of Lyman Street Bridge	---	---	---
		Upstream of Elm Street Bridge	6.1	17.6	2.1
11/21/2002	116	Upstream of Lyman Street Bridge	---	---	---
		Upstream of Elm Street Bridge	6.4	12.2	2.6
11/22/2002	152	Upstream of Lyman Street Bridge	2.9	3.6	2.5
		Upstream of Elm Street Bridge	13.0	27.1	6.7
11/25/2002	164	Upstream of Lyman Street Bridge	1.6	1.8	1.3
		Upstream of Elm Street Bridge	3.4	6.8	0.2
11/26/2002	142	Upstream of Lyman Street Bridge	1.3	1.5	1.2
		Upstream of Elm Street Bridge	0.4	3.2	-0.6
11/27/2002	124	Upstream of Lyman Street Bridge	1.4	1.8	1.2
		Upstream of Elm Street Bridge	-0.3	0.3	-1.2

Notes:

Turbidity Action Level - Average Downstream (Elm Street) $ Average Upstream (Lyman Street) + 50 ntu

--- - No reading due to technical difficulties with monitoring equipment

* - The high levels were caused by debris that accumulated on the probe.

cfs - Cubic feet per second

ntu - nephelometric turbidity units

Negative values are attributed to +/- 2ntu accuracy of the turbidity probe

Measurements collected using YSI 6200 Data Acquisition System using 600 OMS sonde with a 6136 Turbidity Probe

Flow data was obtained from the USGS Station 01197000 in Coltsville, MA at approximately midday.

Table 6 - Summary of Turbidity, PCB, and TSS Water Column Monitoring Results
November 2002 Monthly Report

GE-Pittsfield/Housatonic River Project 1.5 Mile Removal Action
Pittsfield, MA

Location	Date	Estimated Flow (cfs)	Turbidity			Water Temp. (°C)	Water Temp. End(°C)	Calculated Flow Beginning (cfs)	Calculated Flow End (cfs)	Sample ID	Total PCB Concentration (ug/l)	Filtered PCB Concentration (ug/l)	TSS (mg/l)
			High	Low	Daily Avarage								
Upstream of Newell St. Bridge	10/30/02	43	---	---	---	5.25**	7.25**	N/A	N/A	H0-SW000054-0-2C30	ND(0.013)	ND(0.013)	2.1
Upstream of Lyman St. Bridge	10/30/02	43	1.4	0.5	0.8	6.33*	---	---	---	H1-SW000053-0-2C30	ND(0.013)	ND(0.013)	2.7
Upstream of Elm St. Bridge	10/30/02	43	5.8	0.7	1.4	---	---	---	---	---	---	---	---
Downstream of Pomeroy Ave. Bridge	10/30/02	43	---	---	---	5.75**	6.75**	45.8	45.1	H2-SW000052-0-2C30	0.029	ND(0.013)	ND(0.5)
Upstream of Newell St. Bridge	11/06/02	63	---	---	---	---	---	N/A	N/A	H0-SW000054-0-2N06	---	---	---
Upstream of Lyman St. Bridge	11/06/02	63	126.7	4.0	17.5	5.02*	---	---	---	H1-SW000053-0-2N06	ND(0.013)	ND(0.013)	5.4
Upstream of Elm St. Bridge	11/06/02	63	21.6	11.3	17.0	---	---	---	---	---	---	---	---
Downstream of Pomeroy Ave. Bridge	11/06/02	63	---	---	---	3.5**	5.0**	72.9	65.3	H2-SW000052-0-2N06	0.12	0.021	5.7
Downstream of Pomeroy Ave. Bridge (DUPLICATE)	11/06/02	63	---	---	---	3.5**	5.0**	72.9	65.3	H2-SW000052-1-2N06	0.13	---	---
Upstream of Newell St. Bridge	11/20/02	114	---	---	---	3.0**	4.25**	N/A	N/A	H0-SW000054-0-2N20	NR	NR	NR
Upstream of Lyman St. Bridge	11/20/02	114	---	---	---	2.94*	---	---	---	H1-SW000053-0-2N20	NR	NR	NR
Upstream of Elm St. Bridge	11/20/02	114	17.6	2.1	6.1	---	---	---	---	---	---	---	---
Downstream of Pomeroy Ave. Bridge	11/20/02	114	---	---	---	2.0**	3.0**	163.7	163.7	H2-SW000052-0-2N20	NR	NR	NR

Notes:
PCB Action Level - Downstream (Pomeroy Avenue) ≥ Upstream (Lyman Street) + 5 ug/L
N/A - A rating curve is not yet established at the Newell Street Location, therefore, no flow can be calculated
NR - Not yet reported
cfs - Cubic feet per second
ntu - nephelometric turbidity units
--- - No data obtained
* - Temperature measured YSI 600 oms system.
** - Temperature measured using hand held stainless steel thermometer.
Flow data was obtained from the USGS Station 01197000 in Coltsville, MA at approximately midday.
All water column samples collected are 10-hour composite samples.
Two flow values calculated, one at the beginning of the sampling event and one at the end of sampling event.

Table 7 - Stockpile Material CharacterizationTesting Results
November 2002 Monthly Report
GE-Pittsfield/Housatonic River Project 1.5 Mile Removal Action
Pittsfield, MA

(Results are presented in part per million, ppm)

Sample ID	H2-OT000044-0-2C24
Sample type	stockpile material characterization
Date Collected	10/24/2002
Analyte	
APP IX PESTICIDES	
4,4'-DDE	**1.0 J**
DIELDRIN	**0.91**
KEPONE	**3.40**
APP IX SEMIVOLATILES	
1,4-DICHLOROBENZENE	**0.30 J**
2-METHYLNAPHTHALENE	**1.90 J**
ACENAPHTHENE	**12.0**
ACENAPTHYLENE	**0.58 J**
ANTHRACENE	**6.90**
BENZO(A)ANTHRACENE	**5.50**
BENZO(A)PYRENE	**4.50**
BENZO(B)FLUORANTHENE	**1.70 J**
BENZO(GHI)PERYLENE	**3.10 J**
BENZO(K)FLUORANTHENE	**3.40 J**
BIS(2-ETHYLHEXYL) PHTHALATE	**0.39 J**
CHRYSENE	**5.60**
DIBENZO(A,H)ANTHRACENE	**0.61 J**
DIBENZOFURAN	**0.68 J**
FLUORANTHENE	**8.30**
FLUORENE	**5.10**
INDENO(1,2,3-C,D)PYRENE	**2.20 J**
NAPHTHALENE	**1.30 J**
PENTACHLOROBENZENE	**0.22 J**
PHENANTHRENE	**16.00**
PYRENE	**19.00**
APP IX VOLATILES	
1,2,4-TRICHLOROBENZENE	**0.11**
1,2-XYLENE	**0.022**
1,4-DICHLOROBENZENE	**0.055**
2-BUTANONE	**0.20 J**
ACETONE	**0.047**
ACROLEIN	**0.0067**
BROMOMETHANE	**0.0011 J**
CARBON DISULFIDE	**0.0051**
CHLOROBENZENE	**0.058 J**
CIS-1,2-DICHLOROETHENE	**0.0011 J**
ETHYL BENZENE	**0.071 J**
IODOMETHANE (METHYL IODIDE)	**0.00078 J**
M,P-XYLENE (SUM OF ISOMERS)	**0.023**
METHYLENE CHLORIDE	**0.0018 J**
NAPHTHALENE	**2.60**

Table 7 - Stockpile Material CharacterizationTesting Results
November 2002 Monthly Report
GE-Pittsfield/Housatonic River Project 1.5 Mile Removal Action
Pittsfield, MA

(Results are presented in part per million, ppm)

Sample ID	H2-OT000044-0-2C24
Sample type	stockpile material characterization
Date Collected	10/24/2002
Analyte	
TOLUENE	**0.037 J**
TRICHLOROETHYLENE (TCE)	**0.019 J**
XYLENES (TOTAL)	**0.045**
HERBICIDES	
All N/D	
INORGANICS	
CORROSIVITY BY PH (pH)	**7.5**
PERCENT SOLIDS (%)	**87.8**
METALS	
ANTIMONY	**0.65**
ARSENIC	**1.8**
BARIUM	**20.2**
BERYLLIUM	**0.17**
CADMIUM	**0.099**
CHROMIUM	**8.4**
COBALT	**5.1**
COPPER	**46.7**
LEAD	**56.3**
MERCURY	**0.034**
NICKEL	**10.3**
SILVER	**0.38**
TIN	**7.8**
VANADIUM	**6.5**
ZINC	**95.4**
ORGANIC	
PETROLEUM HYDROCARBON	**426**
TOTAL ORGANIC CARBON	**8470**
PCBS	
AROCLOR-1254	**20.00**
AROCLOR-1260	**22.00**
PCB, TOTAL	**42.00**
TCLP PESTICIDES	
All Non-Detects	
TCLP SEMIVOLATILES	
All Non-Detects	

Notes:
Only detected constituents are summarized
J - Indicates an estimated value

Table 8 - Equipment Confirmatory Wipe Samples
November 2002 Monthly Report

GE-Pittsfield/Housatonic River Project 1.5 Mile Removal Action
Pittsfield, MA

(Results are presented in μg/100 cm^2)

Sample ID	Date Collected	Aroclor 1016, 1221, 1232, 1242, & 1248	Aroclor 1254	Aroclor 1260	Total PCBs
H2-XI000029-0-2N20	11/20/2002	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)

Notes:
ND(0.5) - Analyte was not detected. The value in parentheses is the associated detection limit.

Table 9 - PCB Air Sampling Results
November 2002 Monthly Report

GE-Pittsfield/Housatonic River Project 1.5 Mile Removal Action
Pittsfield, MA

(Results are presented in μg/m^3)

Sample ID	Location*	Date Collected	Aroclor 1016, 1221, 1232, 1242, & 1248	Aroclor 1254	Aroclor 1260	Total PCBs
H2-AR000007-0-2N21	background	11/21/2002	NR	NR	NR	NR
H2-AR000008-0-2N21	northeast corner	11/21/2002	NR	NR	NR	NR
H2-AR000009-0-2N21	southeast corner	11/21/2002	NR	NR	NR	NR
H2-AR000010-0-2N21	northwest corner	11/21/2002	NR	NR	NR	NR
H2-AR000011-0-2N21	southwest corner	11/21/2002	NR	NR	NR	NR
H2-AR000011-1-2N21 (DUPLICATE)	southwest corner	11/21/2002	NR	NR	NR	NR

Notes:
Notification Level: 0.05μg/m^3
Action Level: 0.1μg/m^3
NR - Not yet reported
* - See Figure 1 for locations